

**AMENDMENT(S) TO THE CLAIMS**

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3       1.     (currently amended): A method comprising;  
4       compressing video objects;  
5       generating at least one corresponding elementary stream comprising the  
6       compressed video objects;  
7       classifying information within each elementary stream based on importance  
8       and responsive to the compressed video objects as affected by at least one user  
9       interaction via a remote device that is operatively coupled across a network; and  
10       assembling the classified information into packets associated with different  
11       classes of network packets ~~that belong to a single session.~~

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13       2.     (original): The method as recited in Claim 1, wherein classifying the  
14       information within each elementary stream based on importance further includes  
15       assigning different priority levels to shape, motion, and texture information.

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17       3.     (original): The method as recited in Claim 2, wherein assembling  
18       the classified information into packets associated with different classes of network  
19       packets further includes selectively multiplexing a plurality of the network packets  
20       with the same priority level into an application level packet.

1           4.     (original): The method as recited in Claim 2, wherein assembling  
2 the classified information into packets associated with different classes of network  
3 packets further includes arranging the content of at least one of the network  
4 packets in an interleaving fashion.

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6           5.     (currently amended): The method as recited in Claim 1, wherein the  
7 different classes of network packets are associated with a the network, which ~~that~~  
8 provides differentiated services (Diff- Serv) such that an adaptive transmission  
9 environment is implemented for multimedia communications using scalable coding  
10 technology ~~using the differentiation capabilities within at least one network~~  
11 ~~session.~~

1           6.       (currently amended): A method comprising:

2           packetizing content information;

3           generating resource coordination information based at least in part on at  
4           least one prioritizing parameter associated with an application communicating the  
5           content information and on one or more prioritizing parameters associated with a  
6           user interaction via a remote device that is operatively coupled to a network;

7           selectively associating each packet of content information with a service  
8           class selected from among at least two different service classes based on the  
9           resource coordination information;

10          selectively outputting at least one packet of content information based on a  
11          priority associated with the service class associated with the packet of content  
12          information; and

13          providing the at least one packet of content information to ~~a~~ the network.

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15          7.       (currently amended): The method as recited in Claim 6, wherein  
16          ~~generating the resource coordination information further includes generating the~~  
17          ~~resource coordination information based at least in part on at least one prioritizing~~  
18          ~~parameter associated with at least one remote device that is operatively coupled to~~  
19          ~~the network~~ the user interaction comprises at least one of mouse clicking, mouse  
20          moving, fast forward, fast backward, object zoom-in, object zoom-out, add or  
21          delete.

1           **8.**     (original): The method as recited in Claim 6, wherein generating the  
2 resource coordination information further includes generating the resource  
3 coordination information based at least in part on at least one prioritizing  
4 parameter associated with a monitored performance of the network.

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6           **9.**     (original): The method as recited in Claim 6, further comprising  
7 encoding initial content information as the encoded content information.

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9           **10.**   (original): The method as recited in Claim 9, further comprising  
10 segmenting raw video data into a plurality of video objects and wherein at least  
11 one of the video objects is included in the initial content information.

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13           **11.**   (previously presented): The method as recited in Claim 9, wherein  
14 the initial content information includes data representing media information  
15 selected from a group comprising video information, audio information, image  
16 information, and textual information.

1           12. (currently amended): A computer-readable media comprising  
2 computer instructions for performing acts comprising:

3           generating prioritization information based at least in part on at least one  
4 parameter associated with an application streaming media information and on one  
5 or more prioritizing parameters associated with a user interaction via a remote  
6 device that is operatively coupled to a network;

7           associating packets of the media information with a service class selected  
8 from a plurality of different service classes based on the prioritization information;

9           selectively discarding a portion of the packets of the media information in  
10 accordance with an adaptive rate control mechanism at a sending computing  
11 device; and

12           selectively outputting from the sending computing device onto the network  
13 some of the packets of media information based on their respective service-class  
14 priority levels classes.

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16           13. (previously presented): The computer-readable media as recited in  
17 Claim 12, wherein the media information includes data representing media  
18 information selected from a group comprising video information, video objects,  
19 audio information, image information, and textual information.

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21           14. (canceled)

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23           15. (canceled)

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16. (canceled)

17. (canceled)

18. (canceled).

1           19.   (currently amended): An apparatus comprising:  
2           packetizer logic configured to receive encoded content information and  
3           output corresponding packets of content information;  
4           collaborator logic operatively coupled to the packetizer logic and  
5           configured to receive at least one prioritizing parameter associated with at least  
6           one application, including an application communicating the content information,  
7           and one or more prioritizing parameters associated with a user interaction via a  
8           remote device that is operatively coupled to a network; the collaborator logic  
9           further configured to output resource coordination information based at least in  
10          part on the at least one prioritizing parameter associated with the application and  
11          the one or more prioritizing parameters associated with the user interaction;  
12          priority mapping logic operatively coupled to the collaborator logic and  
13          configured to receive the packetized content information and the resource  
14          coordination information, and selectively associate each received packet of content  
15          information with a service class selected from among at least two different service  
16          classes based on the resource coordination information, and selectively output at  
17          least one packet of content information based on a priority associated with each  
18          service class; and  
19          forwarder logic operatively coupled to the priority mapping logic and  
20          configurable to provide the at least one packet of content information to a the  
21          network.

1           20.   (currently amended): The apparatus as recited in Claim 19, wherein  
2   the user interaction comprises at least one of mouse clicking, mouse moving, fast  
3   forward, fast backward, object zoom-in, object zoom-out, add or delete~~collaborator~~  
4   ~~logic is further configurable to receive at least one prioritizing parameter~~  
5   ~~associated with at least one remote device that is operatively coupled to the~~  
6   ~~network, and output the resource coordination information based at least in part on~~  
7   ~~the at least one prioritizing parameter associated with the remote device.~~

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9           21.   (currently amended): The apparatus as recited in Claim 19, further  
10 comprising:

11               network monitoring logic operatively coupled to the collaborator  
12 logic and configurable for use with the network and in monitoring network  
13 performance, and to output at least one prioritizing parameter associated with the  
14 network performance, and

15               wherein the collaborator logic is further configured to receive the at  
16 least one prioritizing parameter associated with the network performance, and  
17 output the resource coordination information based at least in part on the at least  
18 one prioritizing parameter associated with the network performance.

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20           22.   (original): The apparatus as recited in Claim 19, further comprising:  
21               encoding logic operatively coupled to the packetizer logic and  
22 configured to encode initial content information, and output corresponding  
23 encoded content information.



1           **23.**   (original): The apparatus as recited in Claim 22, further comprising:  
2                   segmentation logic operatively coupled to the encoding logic and  
3 configured to segment raw video data into a plurality of video objects, and output  
4 initial content information that includes at least one video object.  
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6           **24.**   (previously presented): The apparatus as recited in Claim 22,  
7 wherein the initial content information includes data representing media  
8 information selected from a group comprising video information, audio  
9 information, image information, and textual information.  
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1           25.   (currently amended): A system comprising:

2           a network environment including a backbone network, and a first access  
3 network and a second access network each being operatively coupled to the  
4 backbone network;

5           a plurality of host devices including a first host device operatively coupled  
6 to the first access network and a second host device operatively coupled to the  
7 second access network, the second host device receiving a user interaction; and

8           a plurality of application-aware resource controllers including a first  
9 application-aware resource controller operatively configured within the first access  
10 network and a second application-aware resource controller operatively configured  
11 within the second access network, wherein the first application-aware resource  
12 controller is configured to selectively aggregate content information associated  
13 ~~with a single~~ at least one communication session established between the first host  
14 device and the second host device via the network environment, ~~and mapping and~~  
15 to map the aggregated information to at least two service classes selected from a  
16 group of two or more different service classes based at least in part on one or more  
17 prioritizing parameters associated with the user interaction.

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19           26.   (currently amended): The system as recited in Claim 25, wherein at  
20 least the first application-aware resource controller is configured to selectively  
21 adapt a flow rate associated with the content information based on an identified  
22 network state of at least one of the first access network, the second access network,  
23 or the backbone network.

1           27. (currently amended): The system as recited in Claim 25, wherein at  
2 least the first application-aware resource controller is configured to selectively  
3 adapt a flow rate associated with the content information based on at least one  
4 ~~identified first device user requirement~~ of the second host device.

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6           28. (original): The system as recited in Claim 25, wherein at least the  
7 first application-aware resource controller is configured to control the content  
8 information responsive to application-based signaling.

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10          29. (currently amended): The system as recited in Claim 25, wherein at  
11 least the first application-aware resource controller is configured to operatively  
12 associate a respective priority with each respective service class of the at least ~~one~~  
13 ~~service-class~~ two service classes.

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15          30. (currently amended): The system as recited in Claim 25, further  
16 comprising at least one processing agent operatively configured within the  
17 backbone network ~~environment~~ and configured to selectively filter ~~content~~ the  
18 aggregated information associated with different communication sessions based on  
19 identified bandwidth constraints and service classes.

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21          31. (previously presented): The system as recited in Claim 25, wherein  
22 the content information includes data representing media information selected  
23 from a group comprising video information, audio information, image information,  
24 and textual information.

1           32.   (previously presented): The system as recited in Claim 30, wherein  
2 the processing agent is further configured to perform packet-level fast transcoding  
3 and related signaling.  
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6           33.   (new): The method as recited in Claim 1, wherein the user  
7 interaction comprises at least one of mouse clicking, mouse moving, fast forward,  
8 fast backward, object zoom-in, object zoom-out, add or delete.  
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10          34.   (new): The computer-readable media as recited in Claim 12,  
11 wherein the user interaction comprises at least one of mouse clicking, mouse  
12 moving, fast forward, fast backward, object zoom-in, object zoom-out, add or  
13 delete.  
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15          35.   (new): The system as recited in Claim 25, wherein the user  
16 interaction comprises at least one of mouse clicking, mouse moving, fast forward,  
17 fast backward, object zoom-in, object zoom-out, add or delete.  
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